

WHAT IS CLAIMED IS:

1. ~~A method for correcting defects in an imaging system comprising the steps of:~~
- ~~transmitting a digital image to at least one spatial light modulator;~~
 - ~~capturing said resulting image;~~
 - ~~comparing variations in intensity between each image pixel and at least one reference image pixel;~~
 - ~~deriving a correction factor from said comparison;~~
 - ~~determining gain of correction at each code value for each image pixel; and~~
 - ~~applying said correction factor and gain to said digital image.~~
2. A method for correcting defects in an imaging system as in claim 1 wherein said resulting image is captured by a digital camera.
3. A method for correcting defects in an imaging system as in claim 1 wherein said spatial light modulator is a LCD.
4. A method for correcting defects in an imaging system as in claim 1 wherein said resulting image is captured by:
- printing said resulting image; and
 - scanning said resulting image.
5. A method for correcting defects in an imaging system as in claim 1 wherein said transmitted digital image is a flatfield of single code value.
6. A method for correcting defects in an imaging system as in claim 1 wherein said gain is determined at specified code values.

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7. A method for correcting defects in an imaging system as in claim 6 wherein said gain is determined by varying gain and visually selecting gain value.

8. A method for correcting defects in an imaging system as in claim 6 wherein said gain is determined by varying gain and measuring standard deviation.

9. A method for correcting defects in an imaging system as in claim 6 wherein said gain is determined by varying gain and measuring spatial frequency components.

10. A method for correcting defects in an imaging system as in claim 6 wherein said gain is determined for every code value.

11. A method for correcting defects in an imaging system as in claim 6 wherein said gain is determined at selected code values and best fit curve is determined.

12. A method for correcting defects in an imaging system as in claim 6 wherein said gain is constant for all code values.

13. A method for correcting defects in an imaging system as in claim 6 wherein said gain is linear as a function of code value.

14. A method for correcting defects in an imaging system as in claim 1 wherein said gain the first derivative of the response characteristic of the spatial light modulator.

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~~15. A method for correcting defects as in claim 1 wherein defect maps are created at multiple code values.~~

16. A method for correcting defects in an imaging system as in claim 1 wherein multiple defect maps corresponding to multiple spatial light modulators are generated.

17. A method for correcting defects in an imaging system comprising the steps of:

- transmitting a digital image data to at least one pixilated device;
- displaying said resulting image;
- capturing said resulting image;
- comparing variations in intensity between each image pixel and at least one reference image pixel;
- deriving a correction factor from said comparison;
- determining gain of correction at each code value for each image pixel; and
- applying said correction factor and gain to said digital image.

18. A method for correcting defects in an imaging system as in claim 17 wherein said resulting image is captured by a digital camera.

19. A method for correcting defects in an imaging system as in claim 17 wherein said spatial light modulator is selected from a group comprising an organic Light Emitting Diode array, a Light Emitting Diode array, a laser array, and a CRT.

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~~20. A method for correcting defects in an imaging system as in claim 17 wherein said resulting image is captured by:~~

~~printing said resulting image; and
scanning said resulting image.~~

21. A method for correcting defects in an imaging system as in claim 17 wherein said transmitted digital image is a flatfield of single code value.

22. A method for correcting defects in an imaging system as in claim 17 wherein said gain is determined at specified code values.

23. A method for correcting defects in an imaging system as in claim 16 wherein said gain is determined by varying gain and visually selecting gain value.

24. A method for correcting defects in an imaging system as in claim 16 wherein said gain is determined by varying gain and measuring standard deviation.

25. A method for correcting defects in an imaging system as in claim 16 wherein said gain is determined by varying gain and measuring spatial frequency components.

26. A method for correcting defects in an imaging system as in claim 16 wherein said gain is determined for every code value.

27. A method for correcting defects in an imaging system as in claim 16 wherein said gain is determined at selected code values and best fit curve is determined.

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~~28.~~ A method for correcting defects in an imaging system as in claim 16 wherein said gain is constant for all code values.

29. A method for correcting defects in an imaging system as in claim 16 wherein said gain is linear as a function of code value.

30. A method for correcting defects in an imaging system as in claim 17 wherein said gain the first derivative of the response characteristic of the pixilated device.

31. A method for correcting defects as in claim 1 wherein defect maps are created at multiple code values.

32. A method for correcting defects in an imaging system as in claim 1 wherein multiple defect maps corresponding to multiple pixilated devices are generated.

33. A method for correcting defects in a spatial light modulator printing system comprising the steps of:

- transmitting a digital image to a spatial light modulator based printing system;
- printing said digital image;
- scanning said printed image to produce a digital version of said printed image;
- comparing variations in intensity between each image pixel and a reference image pixel;
- deriving a correction factor from said comparison;
- deriving a gain;
- applying said correction factor and gain to said digital image; and

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~~printing said corrected digital image.~~

34. A printing assembly which prints two-dimensional swaths on a media comprising:

a light source;

illumination optics which receive light from said light source and images said light at a beamsplitter element which images one polarization state of light at a spatial light modulator, wherein an essentially telecentric illumination is created at said spatial light modulator;

a video board which inputs a first digital image to said spatial light modulator;

a print lens assembly which images said first digital image onto said media to create a printed image;

a scanner which digitizes said printed image to create a resulting image, and

a microprocessor which compares said resulting image to said first digital image and generates a correction factor which is applied to said first digital image.

35. A printing assembly according to claim 7, further comprising a plurality of said spatial light modulators which each represent a different color.

36. A printing assembly according to claim 7, wherein said print lens provides a magnified image on said photosensitive media.

37. A method for correcting defects in an imaging system comprising the steps of:

transmitting a digital image to at least one spatial light modulator;

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~~displaying said resulting image;~~

comparing variations in intensity between each image pixel
and at least one reference image pixel;

deriving a correction factor from said comparison;

determining gain of correction at each code value for each

image pixel; and

applying said correction factor and gain to said digital

~~image.~~

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